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LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. **(Currently Amended)** A method for microdissecting tissue, comprising:
labeling a sample of the tissue according to the method of claim 35;
identifying ~~a component of interest~~ the selectively labeled cells or other tissue structures
~~in the sample to which the fluorescent specific binding agent binds by detecting fluorescence of~~
~~the selectively labeled cells or other tissue structures~~ component of interest in the tissue; and
microdissecting ~~components of interest~~ the selectively labeled cells or other tissue
structures from the tissue.
2. **(Currently Amended)** The method of claim 1, wherein identifying the ~~component~~
selectively labeled cells or other tissue structures comprises intensifying a signal from the
fluorescent specific binding agent to provide an intensified image signal, wherein the
concentration of the specific binding agent allows the intensified image signal to be detected.
3. **(Currently Amended)** The method of claim 2, wherein microdissecting comprises
dissecting tissue components the selectively labeled cells or other tissue structures with a laser
beam, and the method further comprises selectively filtering an image of the laser beam to
reduce laser-induced distortion of the intensified image.
4. **(Currently Amended)** The method of claim 1, wherein the fluorescent specific
binding agent comprises an aqueous solution, and the biological molecule is RNA, DNA or a
protein, ~~which is lost in the presence of water.~~
5. **(Previously presented)** The method of claim 4, wherein the biological molecule is
RNA.

6. **(Currently Amended)** The method of claim 1, wherein microdissecting comprises applying a capture member film to the sample of tissue, and applying laser energy to the component of interest selectively labeled cells or other tissue structures to adhere the component to the capture member film.

7. **(Currently Amended)** The method of claim 1, wherein the ~~sufficient~~ concentration of fluorescent specific binding agent is sufficient to avoid loss of more than about 5% of the biological molecule.

8. **(Currently Amended)** The method of claim 7, wherein the ~~sufficient~~ concentration of fluorescent specific binding agent is sufficient to avoid loss of more than about 10% of the biological molecule.

9. **(Currently Amended)** The method of claim 1, wherein the fluorescent specific binding agent ~~includes~~ comprises a fluorescently labeled antibody, lectin, protein A, protein G and or mixtures thereof.

10. **(Currently Amended)** The method of claim 1, wherein the ~~sufficient~~ concentration of fluorescent specific binding agent is at least 0.02 mg/mL.

11. **(Currently Amended)** The method of claim 10 wherein the ~~sufficient~~ concentration of fluorescent specific binding agent is at least 0.1 mg/mL.

12. **(Currently Amended)** The method of claim 9, further comprising pre-mixing a primary antibody and a secondary antibody, at least one of which is fluorescently labeled, to form the fluorescent specific binding agent, prior to exposing the tissue to the fluorescent specific binding agent to reduce a time of exposure of the tissue to the fluorescent specific binding agent.

13. **(Cancelled).**

14. **(Currently Amended)** The method of claim 2, wherein the fluorescent specific binding agent is present in a ~~sufficient~~ concentration that, when the tissue is exposed to the fluorescent specific binding agent for less than about three minutes, the intensified image signal is detectable.

15. **(Currently Amended)** The method of claim 14, wherein the fluorescent specific binding agent is present in a ~~sufficient~~ concentration that, when the tissue is exposed to the fluorescent specific binding agent for not more than about one minute, the intensified image signal is detectable.

16. **(Currently Amended)** The method of claim 3, wherein microdissecting comprises targeting ~~tissue components~~ the selectively labeled cells or other tissue structures with a target laser beam, and viewing the intensified image through an infrared filter that selectively minimizes image distortion caused by the laser beam, without eliminating the signal image.

17-34. **(Cancelled).**

35. **(Currently Amended)** A method for fluorescently labeling tissue ~~that preserves~~ containing one or more cells or other tissues structures while preserving a biological molecule contained in the tissue, comprising:

D1 contacting the tissue with a fluorescent specific binding agent of ~~sufficient~~ a concentration to provide selectively labeled target cells ~~cells or other tissue structures~~ against which the fluorescent specific binding agent is directed in less than about five minutes;

wherein at the biological molecule in the tissue is preserved after the tissue is contacted with the fluorescent specific binding agent, by labeling the cells or other tissue structures in less than five minutes.

36. **(Currently Amended)** The method of claim 35, wherein the fluorescent specific binding agent is of ~~sufficient~~ a concentration to provide selectively labeled target cells ~~cells or tissue structures~~ against which the fluorescent specific binding agent is directed in less than about three minutes.

37. **(Currently Amended)** The method of claim 36, wherein the fluorescent specific binding agent is of ~~sufficient~~ a concentration to provide selectively labeled target cells or tissue structures against which the fluorescent specific binding agent is directed in not more than about one minute.

38. **(New)** A method for microdissecting a tissue sample, comprising:
pre-mixing a primary antibody and a secondary antibody, at least one of which is fluorescently labeled, to form a fluorescent specific binding agent;
contacting the tissue sample with the fluorescent specific binding agent to provide selectively labeled cells or other tissue structures in the tissue sample;
identifying the selectively labeled cells or other tissue structures in the sample by detecting fluorescence of the selectively labeled cells or other tissue structures in the tissue sample; and
microdissecting the selectively labeled target cells or other tissue structures from the tissue.

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39. **(New)** A method for microdissecting a tissue sample, comprising:
contacting the tissue sample with a fluorescent specific binding agent to provide selectively labeled cells or other tissue structures in the tissue sample;
identifying the selectively labeled cells or other tissue structures in the sample by detecting fluorescence of the selectively labeled cells or other tissue structures in the tissue sample; and
microdissecting the selectively labeled target cells or other tissue structures from the tissue.

40. **(New)** The method of claim 39, wherein the fluorescent specific binding agent comprises a fluorescent antibody, lectin, protein A, protein G or mixtures of two or more thereof.

41. **(New)** The method of claim 40, further comprising:

pre-mixing a primary antibody and a secondary antibody, at least one of which is fluorescent, to generate the fluorescent specific binding agent prior to exposing the tissue to the fluorescent specific binding agent to reduce a time of exposure of the tissue to the fluorescent specific binding agent.

42. **(New)** A method for microdissecting cells or other tissue structures in a tissue sample, comprising:

providing a tissue sample in which the cells or other tissue structures have been fluorescently labeled with a fluorescent specific binding agent that selectively labels the cells or other tissue structures in less than five minutes:

applying a capture film to the tissue sample;

selectively adhering fluorescently labeled cells or other tissue structures in the tissue sample to the capture film; and

removing the capture film from the tissue sample to microdissect selectively adhered cells or other tissue structures from the tissue sample.

43. **(New)** The method of claim 40, wherein the fluorescent specific binding agent is generated by a primary specific binding agent and a secondary specific binding agent prior to exposing the tissue sample to the fluorescent specific binding agent, and wherein at least one of the primary specific binding agent or the secondary specific binding agent is fluorescently labeled.

44. **(New)** The method of claim 42, wherein the fluorescent specific binding agent comprises an antibody.

45. **(New)** A method of fluorescently labeling and microdissecting a tissue sample containing one or more cells or other tissue structures, comprising:

contacting the tissue sample with a fluorescent specific binding agent for less than five minutes, to selectively fluorescently label the cells or other tissue structures in the tissue sample for subsequent detection while reducing degradation of nucleic acid that occurs during more prolonged fluorescent staining;

applying a capture film to the tissue sample;
illuminating the tissue sample with radiant energy that induces fluorescence of the selectively fluorescently labeled cells or other tissue structures;
applying laser energy selectively to the film over the selectively fluorescently labeled cells or other tissue structures to adhere them to the film; and
removing the film from the tissue sample to selectively remove selectively fluorescently labeled cells or other tissue structures from the tissue sample.

46. **(New)** The method of claim 45, wherein contacting the tissue sample with the fluorescent specific binding agent comprises contacting the tissue sample with a concentration of the fluorescent specific binding agent that selectively fluorescently labels the cells or other tissue structures in less than five minutes to permit detection of the selectively labeled cells or other tissue structures.

47. **(New)** The method of claim 45, wherein contacting the tissue sample comprises contacting the tissue sample with the fluorescent binding agent in a non-aqueous solvent.

① 48. **(New)** The method of claim 45, further comprising detecting an intensified image signal of the fluorescently labeled cells or other tissue structures, such that faint signals are detectable.

49. **(New)** The method of claim 48, wherein detecting an intensified image signal comprises detecting the intensified image signal through an infrared filter to selectively minimize image distortion of the intensified image signal.

50. **(New)** The method of claim 48, wherein contacting the tissue sample comprises contacting the tissue sample with the fluorescent specific binding agent for less than three minutes.

51. **(New)** The method of claim 45, wherein the concentration of the fluorescent specific binding agent is at least 0.40 mg/mL.

52. **(New)** The method of claim 51, wherein the concentration of the fluorescent specific binding agent is at least 0.10 mg/mL.

53. **(New)** The method of claim 45, further comprising detecting an intensified image signal of the fluorescently labeled cells or other tissue structures, such that faint signals are detectable.

54. **(New)** The method of claim 53, wherein detecting an intensified image signal comprises detecting the intensified image signal through an infrared filter to selectively minimize image distortion of the intensified image signal.
